

In re Patent Application of
OLOFSSON ET AL.
Serial No. 09/582,637
Filed: OCTOBER 20, 2000

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In the Claims:

This listing of claims replaces all prior versions and listing of claims in the application.

Claims 1-33 (canceled).

34. (Currently amended) An active POTS splitter for use in a telecommunications system using xDSL and POTS and including at least one central office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, the active POTS splitter comprising:

an integrated circuit (IC) chip including

active splitter circuitry to be connected to a subscriber line, at the subscriber's premises, for separating analog POTS signals from xDSL signals; and

line test circuitry associated with said active splitter circuitry for transmitting, at the subscriber's premises, a test signal for measuring quality parameters relating to xDSL transmission on the subscriber line, said line test circuitry transmitting the test signal based upon at least one of an event and receipt of a test request signal, said line test circuitry having associated therewith a unique identity code transmitted with the test signal;

a printed circuit board mounting said IC chip; and

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a line jack connected to said printed circuit board
for insertion into a customer premises line socket.

35. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal is for a specific line test.

36. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal is in a general form for use with a range of different line tests.

37. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one pulse.

38. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one step.

39. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one chirp.

40. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises a series of sinusoidal signals of predetermined amplitude, each sinusoidal signal having a different frequency and the series

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thereof spanning a frequency range for which the line is to be tested.

41. (Previously presented) An active POTS splitter according to Claim 40 wherein each sinusoidal signal has a predetermined duration to facilitate synchronization and measurement.

42. (Previously presented) An active POTS splitter according to Claim 34 wherein the event is according to a predetermined schedule.

43. (Previously presented) An active POTS splitter according to Claim 34 wherein the line test signal comprises a short-circuiting of the subscriber line.

44. (Cancelled).

45. (Cancelled).

46. (Currently amended) In a telecommunications system using xDSL and POTS and comprising at least one central office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, a method of measuring quality parameters relating to xDSL transmission on a subscriber line and comprising:

using an active POTS splitter comprising

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an integrated circuit (IC) chip including
active splitter circuitry for separating analog POTS
signals from xDSL signals and including line test
circuitry for generating a test signal on the
subscriber line from a subscriber's premises based
upon at least one of an event and receipt of a test
request signal, and transmitting a unique identity
code with the test signal,

a printed circuit board mounting the IC chip,
and

a line jack connected to the printed circuit
board for insertion into a customer premises line
socket;

performing measurements at the at least one central
office on the test signal; and

deriving quality parameters for the subscriber line
from the measurements.

47. (Previously presented) A method according to
Claim 46 wherein the event comprises the subscriber line
changing from a high impedance state to a low impedance state.

48. (Previously presented) A method as claimed in
Claim 46 wherein the event comprises a telephone switching
from an on-hook state to an off-hook state.

49. (Currently amended) In a telecommunications
system using xDSL and POTS and comprising at least one central

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office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, a method of measuring quality parameters relating to xDSL transmission on a subscriber line and comprising:

using an active POTS splitter comprising
an integrated circuit (IC) chip including
active splitter circuitry for separating analog POTS
signals from xDSL signals and including line test
circuitry for generating a test signal on the
subscriber line from a subscriber's premises based
upon receipt of a test request signal, and for
transmitting a unique identity code based upon at
least one of receipt of a test request signal and
receipt of an identification request signal,
a printed circuit board mounting the IC chip,
and
a line jack connected to the printed circuit
board for insertion into a customer premises line
socket;

performing measurements at the at least one central office on the test signal; and
deriving quality parameters for the subscriber line from the measurements.

50. (Previously presented) A method according to Claim 49 wherein the test signal is for performance of a specific line test.

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51. (Previously presented) A method according to Claim 49 wherein the test signal is of a general form for use with a range of different line tests.

52. (Previously presented) A method according to Claim 49 wherein the test signal comprises at least one pulse.

53. (Previously presented) A method according to Claim 49 wherein the test signal comprises at least one step.

54. (Previously presented) A method according to Claim 49 wherein the test signal comprises at least one chirp.

55. (Previously presented) A method according to Claim 49 wherein the test signal comprises a series of sinusoidal signals of predetermined amplitude, each sinusoidal signal having a different frequency and the series thereof spanning a frequency range for which the line is to be tested.

56. (Previously presented) A method according to Claim 55 wherein each sinusoidal signal has a predetermined duration to facilitate synchronization and measurement.

57. (Previously presented) A method according to Claim 49 wherein the test signal is transmitted a predetermined time after receiving the test request signal.

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58. (Previously presented) A method according to Claim 46 wherein the event comprises a predetermined schedule.

59. (Previously presented) A method according to Claim 49 further comprising transmitting the unique identity code based upon receiving an identification request signal.

60. (Previously presented) A method according to Claim 49 wherein the event comprises short-circuiting of the subscriber line.

61. (Previously presented) A method according to Claim 49 further comprising collecting and storing results obtained from line tests at the at least one central office and deriving a log of line conditions for each subscriber line therefrom.

62. (Previously presented) A method according to Claim 49 further comprising collecting and storing a plurality of results obtained from line tests at the at least one central office and averaging the plurality of results to obtain a composite result for each subscriber line.

63. (Currently amended) A telecommunications system using POTS and xDSL, comprising at least one central office connected to a plurality of subscriber premises by subscriber lines extending to respective subscriber premises, at least

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at least one of the subscriber premises having an active POTS splitter located therein, the active POTS splitter comprising:

an integrated circuit (IC) chip including

active splitter circuitry to be connected to a subscriber line, at the subscriber's premises, for separating analog POTS signals from xDSL signals, and

line test circuitry associated with said active splitter circuitry for transmitting, at the subscriber's premises, a test signal for measuring quality parameters relating to xDSL transmission on the subscriber line, said line test circuitry transmitting the test signal based upon at least one of an event and receipt of a test request signal, said line test circuitry having associated therewith a unique identity code transmitted with the test signal;

a printed circuit board mounting the IC chip, and
a line jack connected to the printed circuit board

for insertion into a customer premises line socket.

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